

Application No.: 10/085906

Docket No.: GNN-5343CP2

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of the claims in the application.

Listing of Claims:

1. **(Original)** A method for determining the predisposition of a human subject to develop autoimmune disease, said method comprising detecting at least one polymorphic microsatellite repeat (PMR) in the human costimulatory receptor gene locus, wherein the PMR sequence is not an hR2 sequence, to thereby determine the predisposition of a human subject to develop autoimmune disease.
2. **(Original)** The method of claim 1, wherein a PMR sequence is selected from the group consisting of SEQ ID Nos. : 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 44, 48, 51, 54, 57, 60, 63, 66, 69, 72, 75, 78, 81, 84, 87, 90, 93, 96, 99, 102, 105, 108, 111, 114, 117, 120, 123, 126, 129, 132, 135, 138, 141, 144, 147, 150, 153, 156, 159, 162, 165, 168, 171, 174, 177, 180, 183, 186, 189, 192, 195, 198, 201, 204, 207, 210, 213, 216, 219, 222, 225, 228, 231, 234, 237, 240, 243, 246, 249, 252, 255, 258, 261, 264, 267, 270, 273, 276, 279, 282, 285, 288, 291, 294, 297, 300, 303, 306, 309, 312, 315, 321, 324, 327, 330, 333, 336, 339, 342, 345, 348, 351, 354, 357, 360, 363, 366, and 369.
3. **(Original)** The method of claim 1, wherein a PMR sequence is selected from the group consisting of SEQ ID Nos.: 303, 306, 309, 312, 315, 321, 324, 327, 330, 333, 336, 339, 342, 345, 348, 351, 354, 357, 360, 363, 366, and 369.
4. **(Currently Amended)** The method of claim 1, wherein the autoimmune disease is selected from the group consisting of: insulin-dependent diabetes mellitus (IDDM), Addison's disease, Graves' disease, autoimmune hypothyroidism, myasthenia gravis, thymoma, lupus, thyroiditis, postpartum thyroiditis, rheumatoid arthritis, Hashimoto's disease, coeliac disease and leprosy.

Application No.: 10/085906

Docket No.: GNN-5343CP2

5. **(Currently Amended)** The method of claim 1 ~~2~~, wherein the step of detecting is performed using a polymerase chain reaction (PCR) employing a first and second primer.

6. **(Original)** The method of claim 5, wherein the first or second primer comprises a sequence selected from the group consisting of SEQ ID Nos.: 301, 302, 304, 305, 307, 308, 310, 311, 313, 314, 316, 317, 319, 320, 322, 323, 325, 326, 328, 329, 331, 332, 334, 335, 337, 338, 340, 341, 343, 344, 346, 347, 349, 350, 352, 353, 355, 356, 358, 359, 361, 362, 364, 365, 367, and 368.

7-9. **(Cancelled)**

10. **(Currently Amended)** A method for determining the polymorphic variant or subtype of a PMR sequence in the costimulatory receptor locus in a human subject, said method comprising detecting at least one polymorphic microsatellite repeat (PMR) in the CTLA4 gene of ~~in~~ the human costimulatory receptor gene locus, wherein the PMR sequence is not an hR2 sequence, to thereby determine the polymorphic variant or subtype of a PMR sequence in the costimulatory receptor locus in a human subject.

11. **(Original)** The method of claim 10, wherein a PMR sequence is selected from the group consisting of SEQ ID Nos.: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 44, 48, 51, 54, 57, 60, 63, 66, 69, 72, 75, 78, 81, 84, 87, 90, 93, 96, 99, 102, 105, 108, 111, 114, 117, 120, 123, 126, 129, 132, 135, 138, 141, 144, 147, 150, 153, 156, 159, 162, 165, 168, 171, 174, 177, 180, 183, 186, 189, 192, 195, 198, 201, 204, 207, 210, 213, 216, 219, 222, 225, 228, 231, 234, 237, 240, 243, 246, 249, 252, 255, 258, 261, 264, 267, 270, 273, 276, 279, 282, 285, 288, 291, 294, 297, 300, 303, 306, 309, 312, 315, 321, 324, 327, 330, 333, 336, 339, 342, 345, 348, 351, 354, 357, 360, 363, 366, and 369.

12. **(Currently Amended)** The method of claim 10 ~~11~~, wherein the step of detecting is performed using PCR employing a first and second primer.

13-14. **(Cancelled)**

Application No.: 10/085906

Docket No.: GNN-5343CP2

15. (New) A method for determining the predisposition of a human subject to develop autoimmune disease, said method comprising detecting the polymorphic microsatellite repeat (PMR) of SEQ ID NO:354 in the human costimulatory receptor gene locus, wherein said locus comprises exon 1 of CD28 through exon 5 of ICOS and wherein the PMR sequence is not an hR2 sequence, to thereby determine the predisposition of a human subject to develop autoimmune disease.
16. (New) The method of claim 10, wherein the human costimulatory receptor locus comprises exon 1 of CD28 through exon 5 of ICOS.